

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A method for identifying a compound that modulates angiogenesis, the method comprising the steps of:

(i) contacting the compound with a ~~nucleic acid~~, or a Sumo Protease (SUSP-1) polypeptide ~~or a fragment thereof encoded by a nucleic acid~~, wherein the nucleic acid hybridizes under stringent conditions to a ~~second nucleic acid comprising a nucleotide sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:32, SEQ ID NO:43, SEQ ID NO:57, SEQ ID NO:63, SEQ ID NO:68, SEQ ID NO:70, SEQ ID NO:76, SEQ ID NO:81, SEQ ID NO:86, SEQ ID NO:89, SEQ ID NO:120, SEQ ID NO:128, SEQ ID NO:139, SEQ ID NO:153, SEQ ID NO:163, SEQ ID NO:165, SEQ ID NO:169, SEQ ID NO:171, SEQ ID NO:173, SEQ ID NO:175, SEQ ID NO:183, SEQ ID NO:202, SEQ ID NO:210, SEQ ID NO:218, SEQ ID NO:227, SEQ ID NO:232, SEQ ID NO:248, SEQ ID NO:274, SEQ ID NO:285, SEQ ID NO:286, SEQ ID NO:297, SEQ ID NO:307, SEQ ID NO:308, SEQ ID NO:317, SEQ ID NO:318, SEQ ID NO:320, SEQ ID NO:323, SEQ ID NO:324, SEQ ID NO:329, SEQ ID NO:330, SEQ ID NO:340, SEQ ID NO:351, SEQ ID NO:365, SEQ ID NO:377, SEQ ID NO:384, SEQ ID NO:406, SEQ ID NO:408, SEQ ID NO:419, SEQ ID NO:421, SEQ ID NO:428, SEQ ID NO:437, SEQ ID NO:439, SEQ ID NO:445, SEQ ID NO:456, SEQ ID NO:462, SEQ ID NO:481, SEQ ID NO:484, SEQ ID NO:493, SEQ ID NO:496, SEQ ID NO:498, SEQ ID NO:519, SEQ ID NO:521, and SEQ ID NO:523 that comprises an amino acid sequence with 95% identity to SEQ ID NO:457, wherein the SUSP-1 polypeptide regulates angiogenesis in an endothelial cell; and~~

(ii) determining the ~~functional~~ effect of the compound upon the ~~nucleic acid~~ or SUSP-1 polypeptide, thereby identifying a compound that modulates angiogenesis.

2. (Currently amended) The method of claim 1, wherein the ~~functional~~ effect is determined in vitro.

3. (Cancelled)

4. (Currently amended) The method of claim 2, wherein the ~~functional~~ effect is determined by measuring ligand or substrate binding to the SUSP-1 polypeptide.

5. (Cancelled)

6. (Currently amended) The method of claim 2, wherein the ~~functional~~ effect is determined by measuring ~~an enzymatic~~ protease activity.

7. (Original) The method of claim 1, wherein the polypeptide is expressed in a eukaryotic host cell.

8. (Cancelled)

9. (Currently amended) The method of ~~claim 8~~ claim 7, wherein the ~~functional~~ effect is determined by measuring ligand or substrate binding to the polypeptide.

10. (Cancelled)

11. (Currently amended) The method of ~~claim 10~~ claim 7, wherein the ~~functional~~ effect is determined by measuring ~~an enzymatic~~ protease activity.

12. (Original) The method of claim 7, wherein the host cell is an endothelial cell.

13. (Currently amended) The method of claim 12, wherein the ~~functional~~ effect is determined by measuring $\alpha\text{v}\beta 3$ expression.

14. (Currently amended) The method of claim 12, wherein the ~~functional~~ effect is determined by measuring a member selected from $\alpha v\beta 3$ expression, haptotaxis, and chemotaxis.

15. (Currently amended) The method of claim 14, wherein the ~~functional~~ effect is determined by measuring $\alpha v\beta 3$ expression.

16. (Original) The method of claim 1, wherein modulation is inhibition of angiogenesis.

17. (Currently amended) The method of claim 1 wherein the SUSP-1 polypeptide is recombinant.

18. (Withdrawn) The method of claim 1, wherein the nucleic acid comprises a nucleotide sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:32, SEQ ID NO:43, SEQ ID NO:57, SEQ ID NO:63, SEQ ID NO:68, SEQ ID NO:70, SEQ ID NO:76, SEQ ID NO:81, SEQ ID NO:86, SEQ ID NO:89, SEQ ID NO:120, SEQ ID NO:128, SEQ ID NO:139, SEQ ID NO:153, SEQ ID NO:163, SEQ ID NO:165, SEQ ID NO:169, SEQ ID NO:171, SEQ ID NO:173, SEQ ID NO:175, SEQ ID NO:183, SEQ ID NO:202, SEQ ID NO:210, SEQ ID NO:218, SEQ ID NO:227, SEQ ID NO:232, SEQ ID NO:248, SEQ ID NO:274, SEQ ID NO:285, SEQ ID NO:286, SEQ ID NO:297, SEQ ID NO:307, SEQ ID NO:308, SEQ ID NO:317, SEQ ID NO:318, SEQ ID NO:320, SEQ ID NO:323, SEQ ID NO:324, SEQ ID NO:329, SEQ ID NO:330, SEQ ID NO:340, SEQ ID NO:351, SEQ ID NO:365, SEQ ID NO:377, SEQ ID NO:384, SEQ ID NO:406, SEQ ID NO:408, SEQ ID NO:419, SEQ ID NO:421, SEQ ID NO:428, SEQ ID NO:437, SEQ ID NO:439, SEQ ID NO:445, SEQ ID NO:456, SEQ ID NO:462, SEQ ID NO:481, SEQ ID NO:484, SEQ ID NO:493, SEQ ID NO:496, SEQ ID NO:498, SEQ ID NO:519, SEQ ID NO:521, and SEQ ID NO:523.

19. (Currently amended) The method of claim 1, wherein the SUSP-1 polypeptide comprises ~~a sequence selected from the group consisting of SEQ ID NO:4, SEQ ID~~

~~NO:33, SEQ ID NO:44, SEQ ID NO:58, SEQ ID NO:64, SEQ ID NO:69, SEQ ID NO:71, SEQ ID NO:77, SEQ ID NO:82, SEQ ID NO:87, SEQ ID NO:90, SEQ ID NO:121, SEQ ID NO:129, SEQ ID NO:140, SEQ ID NO:154, SEQ ID NO:164, SEQ ID NO:170, SEQ ID NO:172, SEQ ID NO:174, SEQ ID NO:176, SEQ ID NO:184, SEQ ID NO:203, SEQ ID NO:287, SEQ ID NO:298, SEQ ID NO:309, SEQ ID NO:319, SEQ ID NO:325, SEQ ID NO:331, SEQ ID NO:341, SEQ ID NO:352, SEQ ID NO:366, SEQ ID NO:378, SEQ ID NO:385, SEQ ID NO:407, SEQ ID NO:409, SEQ ID NO:420, SEQ ID NO:429, SEQ ID NO:438, SEQ ID NO:440, SEQ ID NO:446, SEQ ID NO:457, SEQ ID NO:463, SEQ ID NO:482, SEQ ID NO:485, SEQ ID NO:494, SEQ ID NO:497, SEQ ID NO:499, SEQ ID NO:520, SEQ ID NO:522, and SEQ ID NO:524~~ SEQ ID NO:457.

20. (Original) The method of claim 1, wherein the compound is an antibody.
21. (Original) The method of claim 1, wherein the compound is an antisense molecule.
22. (Original) The method of claim 1, wherein the compound is a small organic molecule.
23. (Original) The method of claim 1, wherein the compound is a peptide.
24. (Currently amended) A method for identifying a compound that modulates angiogenesis, the method comprising the steps of:
 - (i) contacting the compound with a ~~nucleic acid~~, or a Sumo Protease (SUSP-1) polypeptide or a fragment thereof encoded by a nucleic acid, wherein the nucleic acid hybridizes under stringent conditions to a second nucleic acid comprising a nucleotide sequence selected from the group consisting of ~~SEQ ID NO:3, SEQ ID NO:32, SEQ ID NO:43, SEQ ID NO:57, SEQ ID NO:63, SEQ ID NO:68, SEQ ID NO:70, SEQ ID NO:76, SEQ ID NO:81, SEQ ID NO:86, SEQ ID NO:89, SEQ ID NO:120, SEQ ID NO:128, SEQ ID NO:139, SEQ ID NO:153, SEQ ID NO:163, SEQ ID NO:165, SEQ ID NO:169, SEQ ID NO:171, SEQ ID NO:173, SEQ ID NO:175, SEQ ID NO:183, SEQ ID NO:202, SEQ ID NO:210, SEQ ID NO:218, SEQ ID~~

~~NO:227, SEQ ID NO:232, SEQ ID NO:248, SEQ ID NO:274, SEQ ID NO:285, SEQ ID NO:286, SEQ ID NO:297, SEQ ID NO:307, SEQ ID NO:308, SEQ ID NO:317, SEQ ID NO:318, SEQ ID NO:320, SEQ ID NO:323, SEQ ID NO:324, SEQ ID NO:329, SEQ ID NO:330, SEQ ID NO:340, SEQ ID NO:351, SEQ ID NO:365, SEQ ID NO:377, SEQ ID NO:384, SEQ ID NO:406, SEQ ID NO:408, SEQ ID NO:419, SEQ ID NO:421, SEQ ID NO:428, SEQ ID NO:437, SEQ ID NO:439, SEQ ID NO:445, SEQ ID NO:456, SEQ ID NO:462, SEQ ID NO:481, SEQ ID NO:484, SEQ ID NO:493, SEQ ID NO:496, SEQ ID NO:498, SEQ ID NO:519, SEQ ID NO:521, and SEQ ID NO:523~~ that comprises an amino acid sequence with 95% identity to SEQ ID NO:457, wherein the SUSP-1 polypeptide has protease activity;

(ii) ~~determining the functional effect of the compound upon the nucleic acid or an~~ in vitro activity of the SUSP-1 polypeptide; and

(iii) ~~expressing the nucleic acid or polypeptide in a cell, contacting the nucleic acid or polypeptide with the compound, and determining the phenotypic or chemical effect upon the cell~~ determining the effect the compound upon a cell-based angiogenesis assay using an endothelial cell that expresses the SUSP-1 polypeptide, thereby identifying a compound that modulates angiogenesis.

25-37. (Cancelled)

38. (New) The method of claims 1 or 24, wherein the compound is an siRNA that inhibits expression of a nucleic acid that encodes the SUSP-1 polypeptide in a host cell.